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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,002	08/20/2003	Scott P. Dubal	P17151	8137
25694	7590	06/03/2005	EXAMINER	
INTEL CORPORATION P.O. BOX 5326 SANTA CLARA, CA 95056-5326			QIN, JIANCHUN	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/645,002

Applicant(s)

DUBAL, SCOTT P.

Examiner

Jianchun Qin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-14, 16-23, 25-31 is/are rejected.
- 7) ☒ Claim(s) 3, 15 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/20/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/20/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

With respect to Fig. 1, it is not clear how the cable 30 next to nut 28 is coupled to the adapter 20 and the amplifier 32.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4-10, 13, 14, 16-21, 23 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Celi et al. (U.S. Pub. No. 20050045027) in view of Caffrey et al. (U.S. Pub. No. 20040253925).

With respect to claim 1:

Celi et al. teach a stringed instrument comprising: one or more pickups to generate one or more electrical signals in response to string vibrations (section 0045); one or more digital signal processors to generate at least one digital signal based upon the one or more electrical signals (section 0046, lines 1-11); a communication adapter to transmit the audio signal in a transmission medium to an amplifier (sections 0050 and 0060); and a distortion device to manipulate at least a portion of the one or more digital signals to impart a distortion effect (sections 0058, 0061, 0083, 0086 and 0088).

Celi et al. do not mention expressly: said communication adapter transmits at least one digital signal in a transmission medium in data frames, each data frame comprising a plurality of bits to represent a portion of the at least one digital signal.

Caffrey et al. disclose a method and apparatus for transmitting audio and non-audio information, including: a communication adapter which transmits at least one digital signal in a transmission medium in data frames, each data frame comprising a

plurality of bits to represent a portion of the at least one digital signal (section 0013, lines 1-7; section 0028, lines 4-18; sections 0029, 0030 and 0034).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Caffrey et al. into the invention of Celi et al. in order to provide a more effective, robust and low-cost mechanism to transmit said signal for further digital data processing (Celi et al., section 0060, lines 1-5; Caffrey et al., section 0032).

With respect to claims 2 and 4-10:

Celi et al. teach the stringed instrument that includes the subject matter discussed above. The teaching of Celi et al. further includes: said distortion device is coupled to the one or more digital signal processors to manipulate portions of the at least one digital signal (Fig. 2; sections 0058, 0061, 0083, 0086 and 0088); said distortion device is disposed within logic controlled by the one or more digital signal processors (sections 0050 and 0058); said stringed instrument further comprising an external control to select a degree of the distortion effect to be imparted to the at least one digital signal (sections 0051 and 0052); said distortion device comprises logic to modify a number of bits in each of the at least some of the digital signals based upon a setting of the external control (sections 0051, 0052, 0068 and 0083); distortion effect comprises adding harmonic distortion to the one or more digital signals (sections 0089 and 0090); said distortion effect comprises a replacement of at least a portion of the one or more digital signal with a random bit pattern (sections 0147 and 0148); said

distortion effect comprises a replacement of at least a portion of the one or more digital signals with a predetermined bit pattern (section 0083).

Celi et al. do not mention expressly: regarding claims 2 and 7, said communication adapter comprises a frame buffer to receive the at least one digital signal from the one or more digital signal processors, and the distortion device manipulates bits in at least some of the data frames in the frame buffer.

Caffrey et al. teach a communication adapter comprising a frame buffer to receive the at least one digital signal from one or more digital signal processors and a processing unit further manipulates bits in at least some of the data frames in the frame buffer (section 0013, lines 1-7; section 0028, lines 4-18; sections 0029, 0030 and 0034).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Caffrey et al. into the invention of Celi et al. in order to provide a more effective, robust and low-cost mechanism to transmit said signal for further digital data processing (Celi et al., section 0060, lines 1-5; Caffrey et al., section 0032).

With respect to claim 13:

Celi et al. teach a method comprising: receiving one or more electrical signals from one or more pickups coupled to a stringed instrument generated in response to string vibrations (section 0045); generating one or more digital signals based upon the one or more electrical signals (section 0046, lines 1-11); manipulating at least a portion of the one or more digital signals to impart a distortion effect (sections 0058, 0061,

0083, 0086 and 0088); and transmitting the manipulated signal in a transmission medium from the stringed instrument to a destination device (sections 0050 and 0060).

Celi et al. do not mention expressly: formatting the one or more digital signal into one or more data frames; and transmitting the data frames to a destination device, each data frame comprising a plurality of bits to represent a portion of the one or more digital signals.

Caffrey et al. disclose a method and apparatus for transmitting audio and non-audio information, including: formatting the one or more digital signal into one or more data frames, and transmitting the data frames to a destination device, each data frame comprising a plurality of bits to represent a portion of the one or more digital signals (section 0013, lines 1-7; section 0028, lines 4-18; sections 0029, 0030 and 0034).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Caffrey et al. into the invention of Celi et al. in order to provide a more effective, robust and low-cost mechanism to transmit said signal for further digital data processing (Celi et al., section 0060, lines 1-5; Caffrey et al., section 0032).

With respect to claim 23:

Celi et al. teach an apparatus comprising: a communication adapter to receive one or more digital audio signal for digital signal processing and transmission in a transmission medium (section 0050 and 0060); and a distortion device to modify one or more bits in at least some of the digital signals to impart a distortion effect to the one or more digital audio signals (sections 0058, 0061, 0083, 0086 and 0088).

Celi et al. do not mention expressly: said communication adapter comprising a frame buffer to receive one or more digital audio signal to form data frames for transmission; and said distortion is applied to the data frames.

Caffrey et al. disclose a method and apparatus for transmitting audio and non-audio information, including: a communication adapter comprising a frame buffer to receive one or more digital audio signal to form data frames for transmission in a transmission medium (section 0013, lines 1-7; section 0028, lines 4-18; sections 0029, 0030 and 0034); and said data frames undergo further digital signal processing (such as encoding, conditioning and modulating) (section 0013).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Caffrey et al. into the invention of Celi et al. in order to provide a more effective, robust and low-cost mechanism to transmit said signal for further digital data processing (Celi et al., section 0060, lines 1-5; Caffrey et al., section 0032).

With respect to claims 14, 16-21 and 25-29:

Celi et al. teach the method and apparatus that includes the subject matter discussed above. The teaching of Celi et al. further includes: modifying bits in at least some of the digital data signals to impart the distortion effect (sections 0051, 0052, 0068, 0083 and 0152); modifying portions of the one or more digital signals under the control of one or more digital signal processors (sections 0058, 0061, 0083, 0086 and 0088); and providing a distorted digital signal to an output location for transmission (sections 0050 and 0060); affecting a degree of the distortion effect to be imparted to



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the digital signal in response to a control coupled externally to the stringed instrument (sections 0051 and 0052); modifying at least a portion of the one or more digital signals further comprises modifying a number of bits in each of the at least some of the digital signals based upon a setting of the control (sections 0051, 0052, 0068 and 0083); modifying at least a portion of the one or more digital signals further comprises adding harmonic distortion to the one or more digital signals (sections 0089 and 0090); modifying at least a portion of the one or more digital signals further comprises replacing at least a portion of the one or more digital signal with a random bit pattern (sections 0147 and 0148); modifying at least a portion of the one or more digital signals further comprises replacing at least a portion of the one or more digital signals with a predetermined bit pattern (section 0083).

Celi et al. do not mention expressly: regarding claim 14, storing the one or more data frames in a frame buffer; and the distortion effect is imparted to at least some of the data frames in the frame buffer.

The teaching of Caffrey et al. further includes: storing the one or more data frames in a frame buffer; and the digital signal processing is applied to at least some of the data frames in the frame buffer (sections 0047 and 0048).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Caffrey et al. into the invention of Celi et al. in order to provide a more effective, robust and low-cost mechanism to transmit said signal for further digital data processing (Celi et al., section 0060, lines 1-5; Caffrey et al., section 0032).

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4. Claims 11, 12, 22, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Celi et al. in view of Caffrey et al., as applied claims 1, 13 and 23 above, and further in view of Juskiewicz et al. (U.S. Pat. No. 6353169).

Celi et al. teach the stringed instrument, method and apparatus that includes the subject matter discussed above.

Celi et al. do not mention expressly: said communication adapter comprises a physical layer communication device to transmit data frames according to a 100Base-T protocol; said communication adapter comprises circuitry to draw power from a twisted pair cable.

Juskiewicz et al. teach a communication adapter that comprises a physical layer communication device to transmit data frames according to a 100Base-T protocol (Figs. 1 and 5; col. 4, lines 49-52; col. 9, lines 1-17); and said communication adapter further comprises circuitry to draw power from a twisted pair cable (Figs. 1 and 5; col. 4, lines 49-52; col. 9, lines 1-17).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Juskiewicz et al. into the combination of Celi and Caffrey in order to provide a high-speed point-to-point connections for communication of digital audio data which also facilitates the data transmission over an Ethernet LAN (Juskiewicz et al., col. 3, lines 39-45 and col. 4, lines 49-52).

***Allowable Subject Matter***

5. Claims 3, 15 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Reasons for Allowance***

6. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 3, 15 and 24 is the inclusion of the limitations of: logic to detect the presence of a data frame containing a portion of the digital signal in the frame buffer; and logic to modify an audio slot portion of at least some of the detected data frames. It is these limitations found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5pm.

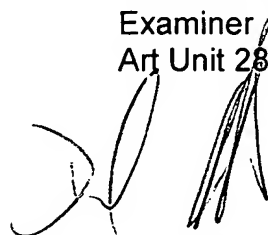
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ

May 26, 2005

Jianchun Qin  
Examiner  
Art Unit 2837



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